

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A production method of an electrical connection structure, the method comprising the steps of:

providing ~~a~~ at least one carbon nanotube as an ~~electrode; and~~ electrode to an arbitrary portion of a biopolymer; and

contacting the electrode with ~~a biopolymer.~~ the biopolymer at the arbitrary portion;
wherein the electrode and the biopolymer are fixed together in a stable electrically connected state.

2. (Currently Amended) The method of claim 1, further comprising, after the steps of providing the carbon nanotube as the electrode and ~~contacting~~ contacting the electrode with the biopolymer, the step of applying an electric current between the electrode and the biopolymer.

3. (Currently Amended) The method of claim 2, wherein ~~a voltage during application of the electric current is~~ the step of applying an electric current between the electrode and the biopolymer comprises applying an electric current of 1 to 20 V.

4. (Original) The method of claim 1, wherein the biopolymer is one of DNA and RNA.

5. (Original) The method of claim 1, wherein the biopolymer has a polar group, and the polar group and the electrode are made to contact each other.

6. (Original) The method of claim 1, wherein the electrode has a polar group at an end portion thereof, and the polar group and the biopolymer are made to contact each other.

7. (Original) The method of claim 5, wherein the polar group is selected from at least one of a carboxyl group, a carbonyl group, a hydroxyl group, an amine group, and an amide group.

8. (Withdrawn - Currently Amended) An electrical connection structure comprising at least ~~an electrode formed by a~~ one carbon nanotube provided as an electrode, and a biopolymer, wherein the electrode and the biopolymer are fixed together at an arbitrary portion of a biopolymer in a stable electrically connected state.~~the electrode is in contact with the biopolymer.~~

9. (Withdrawn) The electrical connection structure of claim 8, wherein the biopolymer is one of DNA and RNA, and the electrode is in contact with a portion of the biopolymer where Na^+ ions on the surface of the one of DNA and RNA have been diffused.

10. (Withdrawn) The electrical connection structure of claim 8, wherein the electrode has a polar group at an end portion thereof and the biopolymer has a polar group at a portion thereof, the respective polar groups repelling each other, and the end portion of the electrode is in contact with a portion of the biopolymer other than the portion where the polar group is present.

11. (Withdrawn - Currently Amended) An electrical connection structure comprising at least ~~an electrode formed by a~~ one carbon nanotube provided as an electrode, and a biopolymer, wherein ~~the electrode is in contact with the biopolymer~~ and the biopolymer are fixed together at an arbitrary portion of the biopolymer in a stable electrically connected state via a polar group.

12. (Withdrawn) The electrical connection structure of claim 11, wherein the polar group is present at a surface of the biopolymer, and the biopolymer is a protein.

13. (Withdrawn) The electrical connection structure of claim 11, wherein the polar group is present at an end portion of the electrode.

14. (Currently Amended) An electric wiring method, comprising the step of electrically connecting at least one carbon nanotube provided as an electrode formed by a carbon nanotube to a biopolymer, wherein the electrode and the biopolymer are fixed together at an arbitrary portion of the biopolymer in a stable electrically connected state. ~~by making the electrode contact the biopolymer.~~

15. (Currently Amended) The electric wiring method of claim 14, wherein, ~~before electric properties of an electrical connection structure in which the biopolymer is electrically connected to the electrode are used,~~ an electric current is applied to the electrode and the biopolymer in a stable electrically connected state ~~electrical connection structure~~ in order to stabilize electrical connection between the biopolymer and the electrode.

16. (Original) The electric wiring method of claim 14, wherein the electrode has a polar group at an end portion thereof, the polar group generating attraction force with respect to the biopolymer.

17. (Canceled)

18. (New) A production method of an electrical connection structure, the method comprising the steps of:

providing at least one carbon nanotube as an electrode to an arbitrary portion of a biopolymer; and

contacting the electrode with the biopolymer at the arbitrary portion;

wherein the electrode and the biopolymer are fixed together in a stable electrically connected state, and wherein contacting the electrode with the biopolymer comprises synthesizing the biopolymer onto the carbon nanotube.

19. (New) The production method of claim 1, wherein the biopolymer is a natural biopolymer.

20. (New) The production method of claim 1, wherein the biopolymer is an artificially synthesized biopolymer.

21. (New) A production method of a semiconductor device including an electrical connection structure, the method comprising the steps of:

providing at least one carbon nanotube with the biopolymer at the arbitrary portion;

contacting the electrode with the biopolymer at the arbitrary portion;

wherein the electrode and the biopolymer are fixed together in a stable electrically connected state.